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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,531	04/15/2004	Kwok Wai Cheung	IPVBP003	2163

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IPVENTURE, INC.
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EXAMINER	
BLAIR, KILE O	

ART UNIT	PAPER NUMBER
4114	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/826,531	CHEUNG ET AL.	
	Examiner	Art Unit	
	Kile O. Blair	4114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *4/15/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al. (US Pat. No. 6,279,946).

Regarding claim 1, Johnson et al. teaches a personal wireless communication device (cellular phone, col. 29, line 19), comprising: a microphone for sound pickup (directional microphone; col. 29, line 22); a directional speaker for sound output (directional speakers; col. 29, line 33-35); and a communication module operatively connected to said microphone and said ultrasonic speaker (hypersonic sound system; col. 29, line 33-35), said communication module supporting two-way communications over a wireless channel between said personal wireless communication device and another communication device (it is well known in the art that said communication module is inherent in the cellular phone taught by Johnson et al.; col. 29, line 19).

Regarding claim 6, Johnson et al. teaches that the communication device of claim 1 is a cellular phone (mobile telephone). (Col. 29, line 19)

Regarding claim 7, Johnson et al. teaches the use of a directional speaker (Col. 29, line 33) for steering audio output.

Regarding claim 8, Johnson et al. teaches the use of hypersonic directional speakers (Col. 29, line 33-35).

3. Claims 13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. (US Pat. No. 6,643,377).

Regarding claim 13, Takahashi et al. teaches a peripheral apparatus (the speaker and base, Fig. 4B, 102) for an electronic device (set top box, Col. 4, line 58), said peripheral apparatus comprising: a directional speaker that provides ultrasonic sound output in a predetermined direction (the speakers produce highly directional ultrasonic waves; Col. 5, line 22-28), wherein the ultrasonic sound output by said directional speaker results in audio sound in the predetermined direction for a user of the electronic device (the waves reach only a specific user; Col. 5, line 22-28),.

Regarding claim 14, Takahashi et al. teaches a peripheral apparatus as recited In claim 13, wherein the electronic device has a peripheral connection port, and wherein said peripheral apparatus connects to the electronic device at the peripheral connection port. It is inherent that the set top box {Fig. 1, 106} must have an output port for connecting to the peripheral apparatus where the peripheral apparatus comprises the speaker physically connected to the peripheral connection port or alternatively

comprises a wireless transmitter (physically connected to peripheral connection port of the set top box) which transmits to a wireless receiver physically connected to the speaker (i.e. a wireless speaker system) otherwise, the audio output system of Takahashi et al. would not operate as described. It is noted that either the wireless or a physical connections described each independently anticipate applicant's claim.

Regarding claim 15, Takahashi et al. teaches a peripheral apparatus as recited in claim 14, wherein said peripheral apparatus further comprises a housing for said peripheral apparatus (the protective net 403 and the unnumbered side and top of speaker cabinet shown in Figs. 4A and 4B), and wherein said peripheral apparatus further comprises a mechanical mechanism (base member that rotably supports each speaker, Fig. 4A, 401; Col. 4, line 31-36) that allows said directional speaker to move relative to said housing, thereby allowing repositioning of said directional speaker to direct the sound output towards different directions.

4. Claims 16-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by McNelley et al. (US Pat. No. 5,777,665).

Regarding claim 16, McNelley et al. teaches a peripheral device (Fig. 14) for a computing device (the display 2 can rest on a computer {Col. 5, line 56-57} and be used with a teleconferencing terminal {i.e. computer; Col. 10, line 45-48}), said peripheral device comprising: a housing (Fig. 14, 2); and a directional speaker coupled to said housing (Fig. 14, 55; although not shown in Fig. 14, the speaker 55 can be mounted on

the side of the display 2 and the speaker can also be directional {see Col. 8, line 43-45}).

Regarding claim 17, McNelley et al. teaches a peripheral device as recited in claim 16, wherein when said peripheral device is operatively connected to said computing device, said computing device directs audio signals to said peripheral device (reproducing sound from teleconferencing terminal; see McNelley et al., claim 5).

Regarding claims 18 and 21, McNelley et al. teaches a peripheral device as recited in claim 16, wherein said peripheral device further comprises a cable that connects said peripheral device to said computing device via a connector or plug and where said housing includes a peripheral port connector (the input and output image ports that couple to the teleconferencing equipment through the use of a cable; Col. 6, line 6-10; {Fig. 6, 18 and 19}).

Regarding claim 19, McNelley et al. teaches a peripheral device as recited in claim 16, wherein said peripheral device further comprises a camera (Fig. 14, 4; Col. 2, line 22-25).

5. Claims 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Breed et al. (US Pub. No. 20010038698).

Regarding claim 22, Breed et al. teaches a method for automatically selecting one of a plurality of potential speakers associated with an audio output device (the speakers can be controlled to provide different outputs for the speakers based on the occupancy of the seats [0136]), said method comprising: obtaining a piece of

information pertaining to the audio output device (the occupancy of the seats being served by entertainment system, the identity of passengers, or the radio station preferences associated with each seat [0136]); determining an appropriate one or more of the potential speakers to output an audio output from the audio output device based on the piece of information (the speakers associated with each seating position can be controlled to provide music from the respective radio station [0136]); and selecting the appropriate one or more of the potential speakers, wherein at least one of the speakers is a directional speaker (the entertainment system selects the appropriate speakers that direct sound toward each individual occupant based on the respective radio station preference of the occupant. The speakers are directional speakers because they can direct sound to individual occupants, a characteristic not found in non-directional speakers [0136]).

Regarding claim 23, Breed et al. teaches a method as recited in claim 22, wherein the piece of information is related to how the audio output device is presently being used (the occupancy of the seats indicates where the entertainment system is being used when listening to the radio [0136]).

Regarding claim 24, Breed et al. teaches a method as recited in claim 22, wherein the piece of information is related to an orientation of the audio output device (the piece of information {occupancy of the seats} is the factor that determines how the speakers will be automatically oriented [0136]).

Regarding claim 25, Breed et al. teaches a method as recited in claim 22, wherein the piece of information is related to a distance from the audio output device to

a surface (The transducers provide information regarding the locus of the head. The waves reflect off of the head and then the distance from each of the transducers to the head is known based on the time it takes for the signal to travel from the head to each of the transducers. This information reveals the occupancy status of the vehicle used for the audio output. [0145])

Claim Rejections - 35 USC § 103

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al.

Regarding claim 2, Johnson et al. teaches a personal wireless communication device as recited in claim 1, wherein the personal wireless communication device further comprises a standard, non-directional speaker for sound output. Although Johnson et al. does not explicitly show a directional speaker and a non-directional speaker in use at the same time, it would have been obvious to one of ordinary skill in the art to take the standard cellular phone with a non-directional speaker and add the improvement of a directional speaker as taught by Johnson et al. in the same reference; col. 29, line 22-35.

9. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of Meyer et al. (US Pat. No. 5,588,041).

Regarding claims 3 and 4, Johnson et al. in view of Meyer et al. teaches a handset sensing device that automatically switches between the handset speaker or the speakerphone speaker (hands-free) based on a an activation indication provided by the

handset sensing device (Meyer et al. col. 7, line 64- col. 8, line 4; Fig. 2, 317). It would have been obvious for one of ordinary skill in the art to take the switching mechanism of Meyer et al. and implement it into the communication device of Johnson et al.; substituting in the directional speaker of Johnson et al. for the speakerphone speaker of Meyer et al and to use the handset sensing device or the keypad key (force sensor) to toggle between the two speakers.

Regarding claim 5, Johnson et al. in view of Meyer et al. teaches a handset (Meyer et al.; Fig. 1, 127). Although Johnson et al. doesn't explicitly state that the cell phone is handheld, Meyer et al. teaches a handset. It would have been obvious for one of ordinary skill in the art to implement device of Johnson et al. with a handset.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of Norris (US Pat. No. 6,151,398).

Regarding claim 9, Johnson et al. in view of Norris teaches the communication device of claim 8, where the ultrasonic speaker is bimorph in most prior research in the field of parametric sound using conventional ultrasonic transducers. (Norris; Col. 2,line 17-20) It would have been an obvious design choice to choose bimorph for the ultrasonic speaker of Johnson et al.

11. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al in view of the American Technology Corporation Technology Licensing webpage (hereinafter as American Technology Corp.).

Regarding claims 10 and 11, Johnson et al. in view of American Technology Corp. teaches directional speakers in a hypersonic sound system (Johnson et al.; Col. 29, line 33-35) American Technology Corp. teaches an ultrasonic wave that is converted into audio after it is transformed in air. (American Technology Corp., [2]) American Technology Corp. further teaches a virtual column of ultrasonic sound that can be aimed at a user. (American Technology Corp., [4]) The teaching of American Technology Corp. regarding the operation of an ultra/hypersonic sound system is inherent in the teaching of Johnson et al. therefore it would have been obvious to one of ordinary skill in the art to combine the device of Johnson et al. with the teachings of American Technology Corp.

Regarding claim 12, it would have been an obvious design choice to limit the diameter of the end of the sound column that reaches the user to less than six inches for the purposes of directing alerts to a driver as disclosed by American Technology Corp. (American Technology Corp., [6]).

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley et al. (US Pat. No. 5,777,665) in view of Brain (How Stuff Works- USB, Oct. 11, 2002).

Regarding claim 20, McNelley et al. doesn't explicitly state that the peripheral device is configured with a bud plug-in card, however Brain teaches that just about any computer on the consumer market at the time of the invention had one or more Universal Serial Bus (USB) connectors on the back (Brain [1]). Additionally, Brain

teaches that just about every peripheral device made at the time of the invention was available in a USB version including video telephones like that of McNelley et al (Brain [5]). Therefore, it would have been obvious for one of ordinary skill in the art to combine the peripheral device of McNelley et al. with a USB plug-in card configuration.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirayanagi (US Pat. No. 6,445,804) teaches an automatic-positioning speaker system that adjusts the speakers based on a calculated distance of the listener to the speaker. The speaker system is ultra-directional and uses ultrasonic sound generation.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kile O. Blair whose telephone number is (571) 270-3544. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe H. Cheng can be reached on (571) 272-4433. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JOE H. CHENG
SUPERVISORY PATENT EXAMINER